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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/046,715	Applicant(s) ANAMI ET AL.	
	Examiner JASON PROCTOR	Art Unit 2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-21 were rejected in the Office Action entered on 9 February 2009.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 April 2009 has been entered.

Applicants' submission on 29 April 2009 has amended claims 1, 2, 7, 9, 11-15, and 17-20. Claims 1-21 are pending in this application.

Claims 1-21 are rejected.

Response to Arguments – 35 USC § 102

1. In response to the previous rejection of claims 1-21 under 35 U.S.C. § 102(b) as being anticipated by Sebastian, Applicants argue primarily that:

> In contrast, Sebastian does not disclose or suggest a shape model comprising a first reference surface, a combined shape model comprising a second reference surface, and a corresponding surface group to determine if there are errors in the combined shape model that are caused by the second reference surface. Instead, Sebastian discloses that a structure can be defined by reference to existing templates, but does not suggest that the structure may include a different reference surface from the existing templates or a control section configured to determine if there are errors in the structure arising from the different reference surfaces.

The Examiner respectfully traverses this argument as follows.

As discussed in the previous Office Action, Sebastian discloses "feature templates" and "macro-feature templates" which correspond to substantial portions of the claim features. In addition, Sebastian discloses that a "history of design work for creating a shape model" (i.e. a

template as previously discussed) *comprises a first reference surface* [*"The templates of the present invention allow the collection, under a single header, of various types of information:... parameters derived by relationship with other parameters from the same template (e.g., a boss' outer diameter computed from the value of* ***its own inner diameter****), parameters derived from other templates in the same domain (e.g., a boss' height computed from the thickness of* ***the wall to which it is attached****), and parameters derived by relationship with parameters from other templates in other domains (e.g., a boss' draft angle computed from* ***the tool orientation relative to the boss****). The relationships may be, for example, algebraic expressions, logical expressions or functions that return a value by means of any data handling procedure encoded in a computer programming language."* (column 11, lines 32-49, emphasis added)]. The emphasized language above shows examples of a "first reference surface" as claimed.

Further, Sebastian discloses combining a plurality of the templates to form a "macro-feature template," as discussed in the previous Office Action (column 11, line 55 - column 12, line 3). Sebastian therefore teaches combining at least two selected unit work history data (i.e., combining at least two templates) and output design work data for creating a combined shape model, *comprising a second reference surface* (i.e., ***the wall to which*** [a boss feature, for example] ***is attached***).

Lastly, Sebastian discloses creating a corresponding surface group in accordance with user input to determine if there are errors in the combined shape model arising from the second reference surface [See column 22, *et seq*., in particular: *"The designer starts by instantiating the nominal wall feature and uses the add-on operation to provide "Fasten" functionality. In this example, the system searches for a function template using "Fasten" as the search criteria and*

provides the user with the boss feature. The user specifies the parameters for the boss such as dimension and positioning information. Based on the selection, the reasoning attributes of the feature template are evaluated and the system examines the appropriate constraints. The constraints retrieve necessary additionally information from other feature templates, look-up tables and the material database 90. The constraints that pertain to the feature "boss" are evaluated, and it is found that the thickness of the boss is adequate to support the applied load. However, while considering the mold fill criteria, the thickness exceeds the manufacturer's recommendation (as retrieved from the manufacturer's external database) for the selected material. Depending on the constraint evaluation results, the user is notified through one of the following mechanisms: warning messages, error messages and design change recommendations... In the boss example, the system notifies the user that the "BOSS IS TOO THICK" and recommends a range of appropriate thickness values for the selected material that satisfies both the mold fill and the strength criteria." (column 22, line 18, *et seq.*)].

Applicants' arguments have been fully considered but have been found unpersuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,552,995 to Sebastian.

Regarding claim 1, Sebastian discloses:

A design support system [(abstract); *"...the present invention is implemented in the 'C++' programming language and uses Pro-Engineer from Parametric Technology Inc. as its solid modeling and front-end CAD system."* (column 11, lines 21-26); *"The present invention enables a designer to create feature templates and store them in a feature template library."* (column 13, lines 44-46)], comprising:

database (FIG. 2, reference 34) which divides a history of design work for creating a shape model, comprising a first reference surface, for each part of the shape model and holds a plurality of design work histories as unit work history data [*"The template scheme provides a uniform data handling mechanism that spans the domain of part, tooling, process and material. The templates of the present invention allow the collection, under a single header, of various types of information: fixed parameters (e.g., user supplied data), parameters derived by relationship with other parameters from the same template (e.g., a boss' outer diameter computed from the value of its own inner diameter), parameters derived by relationship with parameters from other templates in the same domain (e.g., a boss' height computed from the thickness of the wall to which it is attached), and parameters derived by relationship with parameters from other templates in other domains (e.g., a boss' draft angle computed from the tool orientation relative to the boss)."* (column 11, lines 32-49)]; and

a control section configured to fetch at least two unit work history data selected from the plurality of unit work history data held by the database [*"An example of a feature template is a*

"support::tapered wall" feature template, wherein the primitive object is a tapered wall and the function of the tapered wall is support. Another example is a "support::rib" feature template that represents a type of projection known as a rib, where the rib has a support function. A tapered wall and a rib can be regarded as sub-parts that can be used to make a part." (column 12, lines 3-11)]; and

combine at least two selected unit work history data and output design work data for creating a combined shape model, comprising a second reference surface, which is formed by joining part shape models corresponding to the respective unit work history data (column 12, lines 3-11; column 11, line 55 – column 12, line 3); and

create a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the combined shape model arising from the second reference surface [See column 22, *et seq*., in particular: *"The designer starts by instantiating the nominal wall feature and uses the add-on operation to provide "Fasten" functionality. In this example, the system searches for a function template using "Fasten" as the search criteria and provides the user with the boss feature. The user specifies the parameters for the boss such as dimension and positioning information. Based on the selection, the reasoning attributes of the feature template are evaluated and the system examines the appropriate constraints. The constraints retrieve necessary additionally information from other feature templates, look-up tables and the material database 90. The constraints that pertain to the feature "boss" are evaluated, and it is found that the thickness of the boss is adequate to support the applied load. However, while considering the mold fill criteria, the thickness exceeds the manufacturer's recommendation (as retrieved from the manufacturer's external database) for the selected material. Depending on*

the constraint evaluation results, the user is notified through one of the following mechanisms: warning messages, error messages and design change recommendations... In the boss example, the system notifies the user that the "BOSS IS TOO THICK" and recommends a range of appropriate thickness values for the selected material that satisfies both the mold fill and the strength criteria." (column 22, line 18, *et seq.*)].

Regarding claim 2, Sebastian discloses:

A design support system which outputs work data for creating a shape model, comprising a first reference surface, of a design target in order to create the shape model of the design target conforming to a standard shape [(abstract); (column 11, lines 32-49)], comprising:

A database which holds a plurality of unit work history data which are obtained by dividing a history of a design work performed with reference to a first standard shape for each design work history corresponding to a shape model of a predetermined portion (column 11, lines 32-49);

A control section configured to receive designation of data about a second standard shape (FIG. 2, reference 35);

Fetch multiple unit work history data selected from the multiple unit work history data held by the database (column 12, lines 3-11); and

combine each of the fetched unit work history data, reproduce design work with reference to the designated second standard shape for the design works performed with reference to the first standard shape among the design works contained in the unit work history data, and output

work data corresponding to a combined shape model, comprising a second reference surface conforming to the second standard shape [(column 11, lines 32-49); (column 11, line 55 - column 12, line 11)]; and

create a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the combined shape model arising from the second reference surface [See column 22, *et seq.*, in particular: *"The designer starts by instantiating the nominal wall feature and uses the add-on operation to provide "Fasten" functionality. In this example, the system searches for a function template using "Fasten" as the search criteria and provides the user with the boss feature. The user specifies the parameters for the boss such as dimension and positioning information. Based on the selection, the reasoning attributes of the feature template are evaluated and the system examines the appropriate constraints. The constraints retrieve necessary additionally information from other feature templates, look-up tables and the material database 90. The constraints that pertain to the feature "boss" are evaluated, and it is found that the thickness of the boss is adequate to support the applied load. However, while considering the mold fill criteria, the thickness exceeds the manufacturer's recommendation (as retrieved from the manufacturer's external database) for the selected material. Depending on the constraint evaluation results, the user is notified through one of the following mechanisms: warning messages, error messages and design change recommendations… In the boss example, the system notifies the user that the "BOSS IS TOO THICK" and recommends a range of appropriate thickness values for the selected material that satisfies both the mold fill and the strength criteria."* (column 22, line 18, *et seq.*)].

Regarding claim 3, Sebastian discloses:

The design support system according to claim 2 wherein the control section is further configured to compute at least one technical characteristic value of a combined shape model which is created from the output work data [*"As shown in FIG. 2A, the part-feature template includes a volume formula. To evaluate this formula, the template accesses all the sub-part templates to determine the volume of the sub-parts, and then sums these volumes. To evaluate the material cost formula, the template accesses the material-feature template 206 to obtain material price information."* (column 12, lines 57-67)].

Regarding claim 4, Sebastian discloses:

The design support system according to claim 3, wherein:

The database accumulates technical conditions, which are to be met by a part shape model to be created according to each unit work history data, in association with each unit work history data; and wherein the control section is further configured to:

Compare the computed technical characteristic value with the technical conditions related to unit work history data which is the origin of the work data [*"The material selector module 72 generates an a priori choice of suitable material(s) for the product based upon product application and environment. The material selector module 72 draws upon a material properties database 90 for values and a product design library for the subset of critical properties and their default values based upon application and environment. The material selector module 72 interacts with the core design module 76 to continually scan and update a list of viable materials based upon updated data on part performance requirements.* [...] *The engineering economics*

estimator module 74 allows the designer to examine the overall part cost sensitivity to factors that include: material, part dimensions, tool fabrication cost, production lot size, processing cost etc. The engineering economics estimator module can be utilized both before and after part/tool geometry definition. During part creation, the engineering economics estimator module 74 can provide feedback of the total part cost, and the contributions to this cost due to material, tooling, and processing." (column 16, lines 19-47)].

Regarding claim 5, Sebastian discloses:

The design support system according to claim 2, wherein the control section is further configured to receive designation of data about a third standard shape (FIG. 2, reference 35); wherein:

The work data is converted by reproducing a design work with reference to the designated third standard shape for work included in the work contained in the output work data and performed with reference to the second standard shape, and converted work data corresponding to a shape model conforming to the third standard shape is output [(column 11, lines 32-49); (column 12, lines 3-11)].

Regarding claim 6, Sebastian discloses:

The design support system according to claim 1, wherein the control section is further configured to analyze the history of design work and extract input work carried out by a person in charge of work when unit historical data is created [*"CreateT... creates a new template..."* (column 21, lines 50-55, etc.)]; and the design support system further including:

A display section which shows the extracted input work to the person in charge of work to request input of design support information [*"In this example, the system searches for a function template using "Fasten" as the search criteria and provides the user with the boss feature."* (column 22, lines 21-28); *"At any time the user has the ability to modify the feature attribute values and the system processes the effect of these changes…"* (column 22, lines 57-65)]; and

A database which records the design support information in a history of the design work and divides the history of the design work into unit historical data when the design support information is input so to show when the design support information is reused (column 22, lines 41-65).

Regarding claim 7, Sebastian discloses:

A design support system which holds a series of design work histories to reuse as work history data and creates a shape based on the work history data [(abstract); (column 11, lines 32-49); (column 12, lines 3-11)], comprising:

A control section which analyzes the work history data, comprising a first reference surface to extract input work, comprising a second reference surface, carried out by a person in charge of work [(column 11, lines 32-49), (column 21, lines 50-55, etc.)] and creates a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the extracted input work arising from the second reference surface (column 22, line 18, *et seq.*);

A display section which shows the extracted input work to the person in charge of work to request input of design support information (column 22, lines 21-65); and

A database which records the design support information in the work history data when the design support information is input so to show when the design support information is reused (column 22, lines 41-65).

Regarding claim 8, Sebastian discloses:

The design support system according to claim 7, wherein the database is further configured to generate unit work history data by dividing the work history data into predetermined work units for a design target (column 21, lines 50-55, etc.).

Regarding claim 9, Sebastian discloses:

A design support system (abstract), comprising:

A database which accumulates unit work history data which is formed by dividing a history of past design work, comprising a first reference surface, into work units determined for a design target and contains design support information related to input work among the design work [(column 11, lines 32-49); (column 12, lines 3-11)];

A control section configured to selectively show the unit work history on a display section upon receiving designation of the design target [(column 22, lines 21-65) alternatively (column 16, lines 19-47)];

Create a shape comprising a second reference surface by sequentially reproducing the selected unit work history [(column 11, lines 32-49); (column 12, lines 3-11)];

Provide design support information related to input work when the input work is demanded while the unit work history is being reproduced [(column 22, lines 21-65) alternatively (column 16, lines 19-47)]; and

create a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the shape arising from the second reference surface (column 22, line 18, *et seq*.).

Regarding claim 10, Sebastian discloses:

The design support system according to claim 9, wherein the control section is further configured to judge whether the work history to be reproduced agrees with predetermined guidance display conditions while the unit work history is being reproduced (column 22, lines 21-65); and wherein

The display section is further configured to implement a guidance display determined in connection with the guide display conditions if the work history agrees with the guidance display conditions (column 22, lines 21-65).

Regarding claim 11, Sebastian discloses:

A database which accumulates unit work history data which is formed by dividing a history of past design work into work units, comprising a first reference surface, determined for a design target and contains design support information related to an input work among the design work [(abstract); (column 11, lines 32-49); (column 12, lines 3-11)];

A first display device which shows a shape comprising a second reference surface of the design target obtained by sequentially reproducing a history of the design work with reference to the unit work history data [*"The representative embodiment supports, amongst others, the following interfaces: to CAD systems – IGES, Pro-Engineer and IDEAS; for FEM structural analysis – PATRAN/NASTRAN and IDEAS; for FEM molding filling, cooling and shrinkage analysis – C-FLOW, IDEAS, Moldflow and TMC; and for tool design – IDEAS, Pro-Engineer and DME Moldbase Catalog."* (column 18, lines 35-41)];

A second display device which shows design support information contained in the unit work history data by reproducing a history of the design work prior to the reproduction at the first display device [(column 18, lines 35-41); (column 11, lines 21-26)]; and

a control section which creates a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the shape arising from ***said*** second reference surface (column 22, line 18, *et seq.*).

Regarding claim 12, Sebastian discloses:

A design support method using a computer, wherein:

A series of design work histories is held in multiple quantities as work history data, comprising a first reference surface, comprising a first reference surface in a database in order to create a part shape model [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46)];

At least two selected history data are fetched from the held multiple work history data according to an instruction input to a processor (column 22, lines 21-65); and

Design work data for creating a one-piece shape model comprising a second reference surface by combining the at least two fetched work history data and connecting part shape models corresponding to the respective work history data is output (column 11, line 32 - column 12, line 11); and

a corresponding surface group is created by a control section in accordance with user input of a correspondence to determine if there are errors in the one-piece shape model arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 13, Sebastian discloses:

A design support method which uses a computer to create a shape model of a design target conforming to a desired standard shape according to input to its processor and outputs work data for creating the shape model of the design target [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46)], comprising the steps of:

Holding a plurality of histories of design work performed in the past with reference to the respective standard shapes, comprising a first reference surface, in a database as work history data (column 13, lines 44-46);

Accepting designation of data about a second standard shape, which is a desired standard shape, according to an instruction input to the processor (column 22, lines 21-65);

Fetching the selected multiple work history data from the multiple work history data held in the database (column 22, lines 21-65); and

Combining respective pieces of the fetched work history data, reproducing design work with reference to the designated second standard shape for the design work performed in the past

with reference to the respective standard shapes among the design work contained in the work history data, and outputting work data corresponding to a combined shape model, comprising a second reference surface, conforming to the second standard shape (column 12, lines 3-11); and

creating a corresponding surface group to determine if there are errors in the combined shape model arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 14, Sebastian discloses:

A design support method which holds a series of design work histories as work history data in order for reuse and generates a shape by a computer according to the work history data according to an instruction input to a processor [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46)], comprising the steps of:

Analyzing the work history data, comprising a first reference surface, upon input to the processor to extract the input work performed by a person in charge of work (column 22, lines 21-65);

Showing the extracted input work, comprising a second reference surface to the person in charge of work to request input of design support information;

when the design support information is input, recording the design support information in the work history data [(column 11, lines 32-49); (column 22, lines 21-65)]; and

creating a corresponding surface group to determine if there are errors in the extracted input work arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 15, Sebastian discloses:

A design support method, comprising the steps of:

Accumulating, using a computer, unit work history data which is formed by dividing a history of past design work into work units, comprising a first reference surface, determined for a design target and contains design support information related to input work among the design work;

Showing the unit work history selectively upon receiving designation of the design target by the computer;

Creating a shape, comprising a second reference surface, by sequentially reproducing the selected unit work history;

Providing the design support information related to input work when the input work is demanded while the unit work history is being reproduced [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46); (column 22, lines 21-65). This claim presents a combination of limitations recited by previous claims. These citations of the prior art are explained in more detail in the context of the previous claims.]; and

creating a corresponding surface group to determine if there are errors in the shape arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 16, Sebastian discloses wherein it is judged whether the work history to be reproduced conforms to predetermined guidance display conditions while the unit work history data is being reproduced by the computer and, if it conforms to the guidance display conditions, a guidance display determined in connection with the guide display conditions is performed (column 22, lines 21-65).

Regarding claim 17, Sebastian discloses a recording medium storing a design support program and being computer-readable, the design support program comprising:

A module holding a series of design work histories as a plurality of work history data, comprising a first reference surface, for creation of a part shape model, comprising a second reference surface [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46)];

A module fetching at least two selected work history data from the held multiple work history data (column 22, lines 21-65); and

A module for outputting design work data for creating a one-piece shape model by combining the at least two fetched work history data and connecting part shape models corresponding to the respective work history data (column 12, lines 3-11); and

a module creating a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the part shape model arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 18, Sebastian discloses:

A recording medium storing a design support program and being computer-readable, the design support program comprising:

A module outputting work data for creating a shape model of a design target in order to create the shape model of the design target conforming to a desired standard shape [(column 11, lines 32-49); (column 12, lines 3-11)];

A module holding a history of design work performed with reference to a first standard shape, comprising a first reference surface, as a plurality of work history data [(column 11, lines 32-49); (column 12, lines 3-11)];

A module receiving designation of data about a second standard shape, comprising a second reference surface, which is a desired standard shape [(column 11, lines 32-49); (column 12, lines 3-11)];

A module fetching the selected multiple work history data from the held multiple work history data (column 22, lines 21-65); and

A module combining each of the fetched work history data, reproducing design work with reference to the designated second standard shape for the design works performed with reference to the first standard shape among the design works contained in the work history data, and outputting work data corresponding to a one-piece shape model conforming to the second standard shape [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46); (column 22, lines 21-65). This claim presents a combination of limitations recited by previous claims. These citations of the prior art are explained in more detail in the context of the previous claims.]; and

a module creating a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the second standard shape caused by the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 19, Sebastian discloses:

A recording medium storing a design support program and being computer-readable, the design support program comprising:

A module holding a series of design work histories, comprising a first reference surface, to reuse as a work history data (column 13, lines 44-46);

A module analyzing the work history data to extract input work performed by a person in charge of work (column 22, lines 21-65);

A module showing the extracted input work, comprising a second reference, to the person in charge of work to receive input of design support information (column 22, lines 21-65); and

A module recording the design support information in the work history data when the design support information is input (column 22, lines 21-65); and

a module creating a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the extracted input work arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 20, Sebastian discloses:

A recording medium storing a design support program and being computer-readable, the design support program comprising:

A module accumulating unit work history data which is formed by dividing a history of past design work into work units, comprising a first reference surface, determined for a design target and contains design support information related to input work among the design work [(abstract); (column 11, lines 32-49); (column 12, lines 3-11); (column 13, lines 44-46)];

A module selectively showing the unit work history upon receiving designation of the design target (column 22, lines 21-65);

A module creating a shape, comprising a second reference surface, by sequentially reproducing the selected unit work history [(column 11, lines 32-49); (column 12, lines 3-11)]; and

A module providing design support information related to an input work when the input work is demanded while the unit work history is being reproduced (column 16, lines 19-47); and

a module creating a corresponding surface group in accordance with user input of a correspondence to determine if there are errors in the shape arising from the second reference surface (column 22, line 18, *et seq.*).

Regarding claim 21, Sebastian discloses:

The recording medium being computer-readable according to claim 20, wherein:

The design support program stored in the recording medium further includes a module judging whether the work history to be reproduced agrees with predetermined guidance display conditions while the unit work history is being reproduced and, if the work history agrees with the guidance display conditions, implements a guidance display determined in connection with the conditions [(column 16, lines 19-47); (column 22, lines 21-65)].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jason Proctor/
Examiner
Art Unit 2123

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